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FREQUENTLY ASKED QUESTIONS

Question: What type of furnaces will this humidifier work on?

Answer: The unit will work on most forced air furnaces incorporating a heating source, a supply duct, and a return duct at least 8" in width.

Comment: The technology used in this humidifier to deliver moisture to the air is the simplest and easiest style, a bypass type evaporative humidifier. Your furnace fan creates a pressure difference between the supply air (hot, high pressure) and return air (cold, low pressure). By installing a bypass tube between the supply and return duct a small amount of air is forced (via the pressure difference) to flow from the supply duct through the humidifier's evaporator pad and back into the return duct. What will differ from furnace to furnace or home to home is how much moisture or capacity you will get from the unit. There are several factors which will affect this, how old is your home, how old is your furnace, how well insulated is your home. For example, the capacity for this unit is 15 US gallons per 24 hrs of operation. This is based on ARI standards (120'F hot air temp, 60'F water supply temp, 0.5" static pressure difference between supply & return duct), used by all humidifier manufacturers. If your furnace is a hi efficiency or pulse type furnace the hot air temperature may be less, or the length of time the furnace burner is on may be less; therefore as a rule of thumb we would say you would get approx. 75% to 80% of rated output.

Question: How much moisture does the humidifier deliver to the air in my home?

Answer: This model will deliver 15 US Gallons (12.5 Imperial gallons, 57 litres) per 24 hours of operation.

Comment: 24 hours of operation means at design conditions; your furnace will only deliver the required hot air (120'F) when it is on. Your furnace should not cycle more than 1/3 of the time so the 24 hours of humidifier operation may take up to 3 days to complete.

Question: How much water does this humidifier use?

Answer: This humidifier is 100% efficient, meaning all the water it uses is delivered to the air to humidifier your home. It will use 15 US gallons (12.5 Imperial gallons, 57 litres) per 24 hrs of operation.

Comment: As mentioned above 24 hours of operation means at design conditions – your furnace will only deliver the required hot air (120'F) when it is on. Your furnace should not cycle more than 1/3 of the time so the 24 hours of humidifier operation may take up to 3 days to complete.

Question: I'm replacing an old humidifier on my furnace can I use the old components?

Answer: You should replace all the components to ensure good operation. You may be able to utilize the existing duct cut outs for the new install however some reworking may be required.

Comment: As a rule we like to see you change all the components, particularly the water supply tube. As over time minerals, solids, or sludge may have built up, these will very quickly clog the water inlets, or over time the tube may have become worn or leaky. Replace the bypass duct as well, there may be secondary dampers unseen which will block air or again there may be unseen wear. The same goes for electrical components or wiring these may be malfunctioning or worn out. Note: If you have a humidifier which was interlocked with your furnace (meaning the humidifier only came on when the furnace came on) then the old transformer is wired in with your furnace. Do not attempt to disconnect this transformer from the furnace only disconnect the low voltage side wires for the humidifier and tape over the terminals.

Question: I've installed the humidifier on my furnace and it is functioning properly but I do not feel anything and humidistat reading is not changing, is the humidifier working?

Answer: As long as there is hot air going through the humidifier and there is water pan and the drum assembly is getting wet then moisture is being delivered to the air in your home.

Comment: All year, and especially during the winter months when many combustion appliance are operating in your home, fresh outdoor air is required to ensure a healthy environment for your family. Do not think of your home as a sealed bubble, no matter how well insulated, all homes breath (some more than others). The cold dry outside air is mixing with the air in your home constantly, even when your furnace is not running. A furnace humidifier will work to offset the constant effect the dry outside air has on your home, and your home's furnishings. Throughout the winter there is a constant diminishing and replenishing of moisture levels in the home, conditions inside and out rarely remain stagnant for any length of time.

Installation

- READ THESE INSTRUCTIONS FULLY BEFORE INSTALLING THIS PRODUCT.
- SAVE THESE INSTRUCTIONS FOR REFERENCE.
- SHUT THE WATER OFF BEFORE WORKING ON THE HUMIDIFIER.
- SHUT THE POWER OFF BEFORE WORKING ON THE HUMIDIFIER.
- TAKE PRECAUTION WHEN CUTTING OR HANDING METAL PCS. (CUT DUCT WORK), SHARP EDGES CAN CAUSE SERIOUS INJURY.
- WHEN DRILLING OR CUTTING INTO DUCTING BE EXTREMELY CAREFUL NOT TO DAMAGE AIR-CONDITIONING COILS OR OTHER FURNACE APPARATUS.
- THIS UNIT MUST BE INSTALLED IN 8" WIDE DUCT MINIMUM.
- DO NOT INSTALL THIS UNIT WHERE EXTREME TEMPERATURES EXIST (BELOW 8°C / 45°F OR ABOVE 63°C / 145°F).
- THIS UNIT IS NOT SUPPLIED WITH A DRAIN TUBE. HOWEVER WE DO RECOMMEND YOU PURCHASE AND INSTALL A 1/2" DRAIN TUBE (SEE SECTION INSTALLATION INSTRUCTIONS) TO PROTECT AGAINST WATER OVERFLOW.
- FOR THIS UNIT TO OPERATE PROPERLY IT MUST BE INSTALLED ON A FORCED AIR HEATING SYSTEM WITH A SUPPLY DUCT AND RETURN DUCT.
- THE HUMIDIFIER AND THE BYPASS COLLAR DAMPER ARE TO BE INSTALLED ON DUCTING ONLY. UNDER NO CIRCUMSTANCES MOUNT ANY COMPONENT TO THE FURNACE BODY.

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INSTALLATION AND OPERATING INSTRUCTIONS: Furnace Humidifier

- ELECTRICAL WIRING, WATER SUPPLY, AND DRAIN TUBE MUST NOT KINK OR COME INTO CONTACT WITH SHARP EDGES OR HOT SURFACES.
- IF REPLACING AN EXISTING FURNACE HUMIDIFIER, WE RECOMMEND YOU REPLACE ALL COMPONENTS TO ENSURE PROPER HUMIDIFIER OPERATION.
- THE INSTALLATION OF THIS PRODUCT MUST COMPLY WITH NATIONAL AND LOCAL ELECTRICAL, PLUMBING, BUILDING, AND MECHANICAL CODES.

REQUIRED TOOLS

- Safety glasses
- Work gloves
- Electric or cordless drill
- Drill bits (3/8", 1/8", 7/32", 7/64")
- Tin snips
- Full size Philips or Roberstons screw driver
- Short handle Philips or Roberstons screw driver
- Adjustable wrench
- Utility knife
- Pliers
- Level
- Tape
- Measuring tape or ruler
- Medium-grit sand paper
- Pencil

SELECTION OF LOCATION TO MOUNT THE HUMIDIFIER

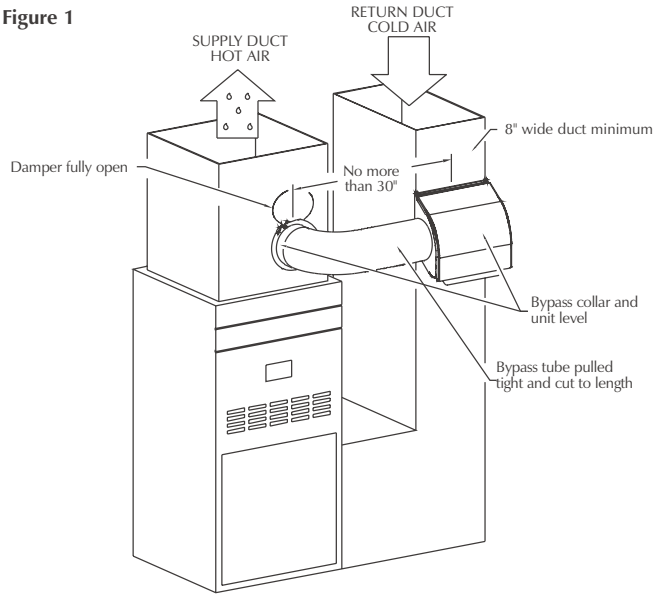
All bypass type furnace-mount humidifiers rely on the pressure difference which exists between the supply duct (hot air) and the return duct (cold air) to create an air flow through the humidifier's evaporator pad. The air will ALWAYS flow from hot (high pressure) to cold (low pressure).

•INSTALLATION TIP: Before starting fully plan out the installation. Check for the locations of the humidifier, bypass collar & damper, and the humidistat and associated sensors. Plan the length and type of ducting required, the water supply, the water drain, the electrical wiring, and a constant 120 volt outlet to plug in the transformer. This will ensure your installation goes as easy and quickly as possible

1. The humidifier body and bypass tube are installed at eye level, easily accessible for installation and routine maintenance.
2. The space between the humidifier body and bypass tube are no more than 30" to ensure maximum air flow through the humidifier.
3. The supplied flex bypass tube is cut to the proper length and pulled tight to ensure maximum air flow.
4. The humidistat is located a minimum of 6" upstream of the humidifier, where moist air will enter the return duct.
5. The bypass damper is fully open.
6. The humidifier is mounted level on the duct.
7. There is nothing inside the duct behind the bypass collar and damper or the humidifier body.
8. The humidifier body and the bypass collar and damper are level.

IDEAL INSTALLATION

Figure 1



Not all installations will be as shown above – in cases where:

- The bypass duct required is more than the supplied 30"
- The bypass collar and damper must be installed above or below the humidifier
- The bypass collar and damper must be installed perpendicular to the humidifier

Use hard metal duct and hard metal elbows. This will minimize the amount of air-flow restriction.

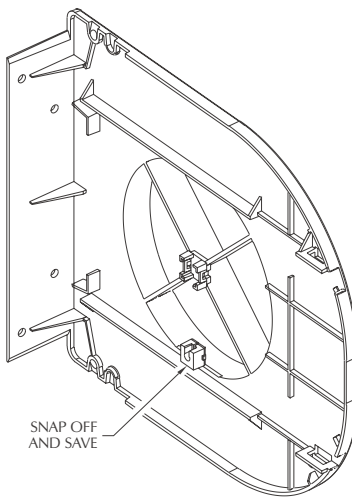


Figure 2

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HUMIDIFIER BODY INSTALLATION

This humidifier is designed to be mounted on the return duct (cold air) for safety reasons. This will minimize the exposure to high temperatures and extend product/component life. Always take precaution to ensure that water supply tube, water drain tube, any electrical wiring does not become kinked or come into contact with sharp edges or hot surfaces. Keep in mind that the humidistat must be mounted at least 6" upstream from the humidifier cabinet, where moist air enters the duct.

CAUTION: When cutting or drilling into ducting take care not to damage any air-conditioning coils or other furnace apparatus.

CAUTION: Wear safety glasses and work gloves when installing this unit, sharp metal edges can cause severe injury.

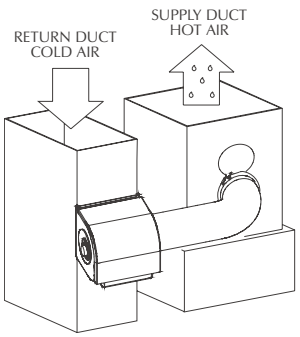
CAUTION: Turn the furnace off before starting this installation.

This humidifier cabinet consists of two side panels (bypass side panel and motor side panel), a front cover, and a water pan. The surface of the duct will form the rear of the humidifier cabinet.

STEP #1: RIGHT HAND DUCTING OR LEFT HAND DUCTING

Once you have decided the best location for the humidifier determine if the unit must be left or right hand ducting. This will depend on whether the hot air duct is to the left or right of the cold air duct. (Fig. 3) The side panels are symmetrical so setting up for left or right hand ducting is done by flipping the panel 180 degrees. (Fig. 4)

RIGHTHAND DUCTING



LEFTHAND DUCTING

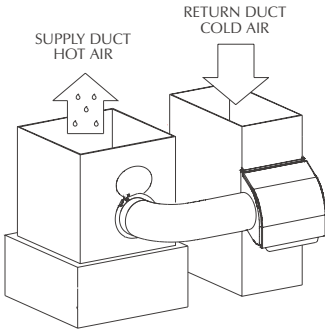


Figure 3

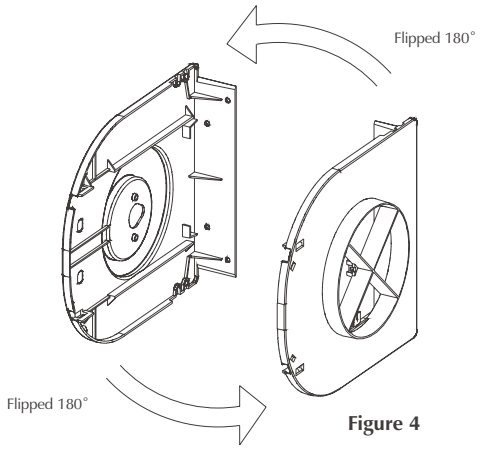


Figure 4

STEP #2: MOUNTING THE HUMIDIFIER CABINET ON THE DUCT

If you have not already done so, remove the humidifier side panels from the carton. Locate the "Humidifier Cabinet Mounting Template".

CAUTION: When cutting or drilling into ducting take care not to damage any air-conditioning coils or other furnace apparatus.

CAUTION: Wear safety glasses and work gloves when installing this unit. Sharp metal edges can cause severe injury.

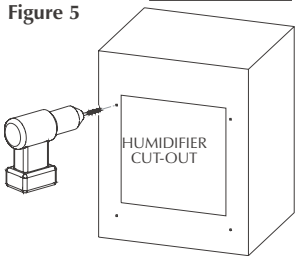
CAUTION: Turn off the furnace before beginning this installation.

DRILLING THE HOLES AND MAKING THE CUTOUT

1. Use adhesive tape to affix the template onto the duct in the selected location. Use the level line on the template to ensure the humidifier cabinet will be mounted level.
2. Drill the 4 marked 1/8" side panel mounting holes. (Fig. 5)
3. Using a 3/8" drill bit (not supplied) drill a hole inside the rectangle area marked "Humidifier Cut Out". (Fig. 6)
4. Using the 3/8" hole as a starting point cut out the Humidifier Cut Out area marked on the template using tin snips (not supplied). Cut on the outside of the lines to ensure the cabinet will fit.
5. Remove remaining portion of the template from the duct.

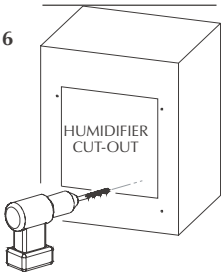
DRILL HOLES

Figure 5



DRILL CUT-OUT

Figure 6



MOUNTING THE BYPASS SIDE PANEL

6. Mount the bypass side panel to the duct first. This is the side of the humidifier closest to the hot air duct.
7. Use 2 of the supplied screws to secure the bypass side panel onto the duct work. The screws will install through two holes on the bypass side panel flange into two of the holes drill in #2. (Fig. 7)

Figure 7

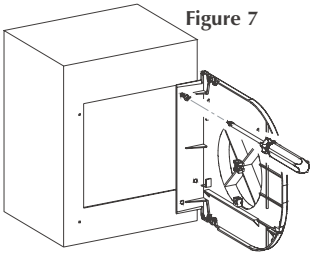
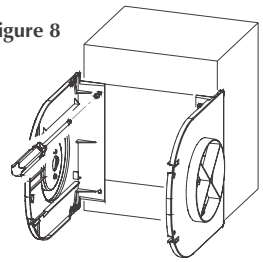


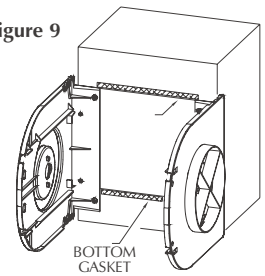
Figure 8



MOUNTING THE MOTOR SIDE PANEL

8. Repeat the last two steps for the motor side panel. (Fig. 8)
9. After the side panels are mounted onto the duct install the two strips of gasket on the duct in between the two sides top and bottom, as shown in figure 9.

Figure 9



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MOUNTING THE WATER PAN

10. Install the water pan into the side panels. The water pan will install with the drain fitting to the rear of the humidifier. (Fig. 10)

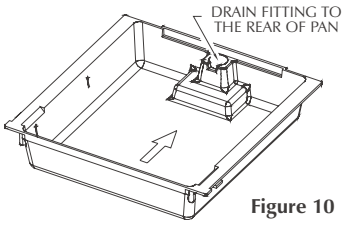


Figure 10

IMPORTANT NOTE: *IF YOU ARE PLANNING ON INSTALLING A DRAIN TUBE (NOT SUPPLIED) DRILL OUT THE DRAIN FITTING AS SHOWN IN THE SECTION "OVERFLOW DRAIN CONNECTION" BEFORE INSTALLING THE DRUM. ONLY DRILL OUT THE DRAIN FITTING IF YOU ARE INSTALLING A DRAIN TUBE. YOU WILL HAVE PURCHASE THE TUBE SEPARATELY.*

11. Position the water pan between the sides so that the flange on either side of the water pan is resting on ribs on the inside of either side panel. (Fig. 11)

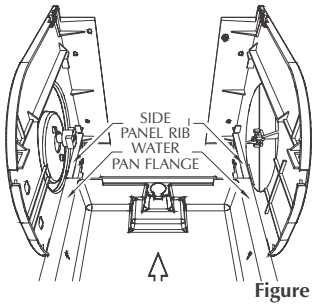


Figure 11

12. Before the water pan is fully installed you will have to slightly deflect the front of both side panels (one at a time) to insert the hooks on the front of the water pan into slots on the front of the side panels. (Fig. 12) As you are doing this be sure that the rear of the water pan flange is sliding under the upper ribs at the rear of the side panels. (Fig. 13) Once the water pan is in the proper position, secure the water pan in place using the two #6 screws provided in the hardware pack (fig. 13b)

Figure 12

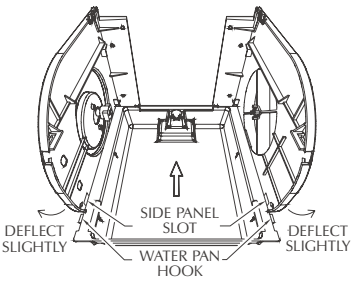
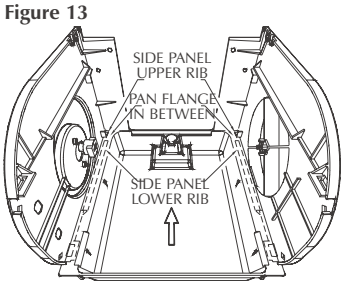


Figure 13



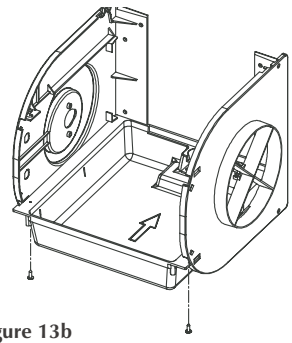


Figure 13b

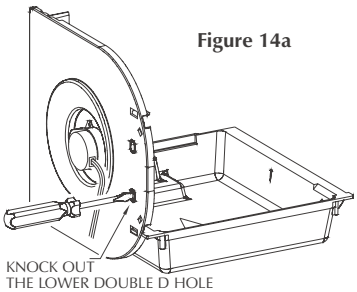


Figure 14a

INSTALLING THE FLOAT AND VALVE ASSEMBLY

Note before installing the float and valve assembly you will have to remove the proper double "D" knockout, refer to figure 14A. Using a screw driver remove the lower knockout closest to the water pan.

13. Once the pan is in place install the float & valve assembly, first remove the white mounting nut (Fig. 14) insert the threaded portion of the float valve into the double D hole and secure in place with the white mounting nut removed earlier. Hold the valve as straight as possible while tightening so an accurate water level can be maintained. (Fig. 15)

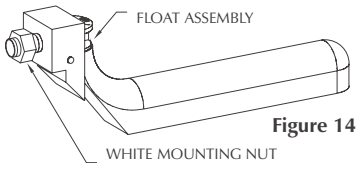


Figure 14

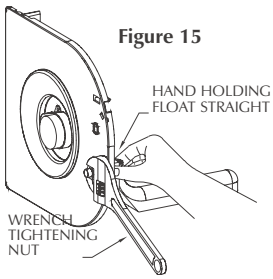


Figure 15

INSTALLING THE BEARING INTO THE BYPASS SIDE PANEL

14. Retrieve the Bearing which was removed from the bypass side panel at the beginning of the installation (Fig. 16) and install it into the center of the bypass side panel. (Fig. 17) If replacing or repairing a bearing insert a slotted screw driver into the back top of the bearing and rotate the screw driver, the bearing will pop out of the side panel. (Fig. 17B)

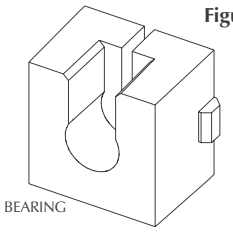


Figure 16

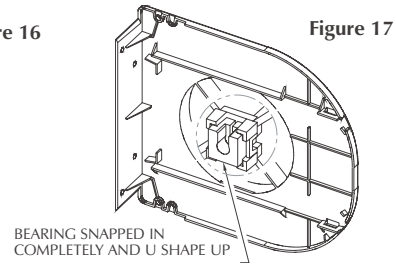


Figure 17

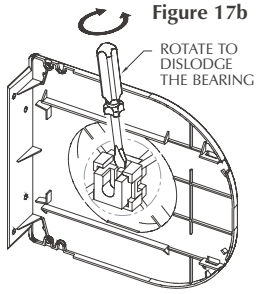


Figure 17b

INSTALLING THE DRUM AND EVAPORATOR PAD ASSEMBLY

15. Retrieve the drum and evaporator pad assembly. This assembly is made up of the drum the evaporator pad, and the drum shaft, you will notice this assembly has an open end and a closed end. (Fig. 18)

16. Starting with the closed end install the drum shaft into the center of the motor coupling then install the other end of the drum shaft into the bearing, gently pushing down in place to position. (Fig. 19)

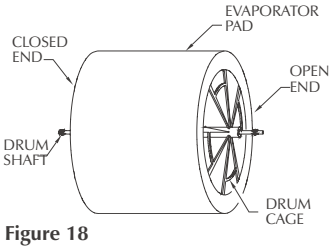


Figure 18

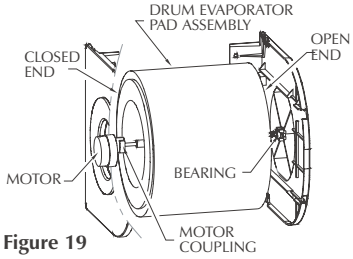


Figure 19

STEP #3: MOUNTING THE BYPASS COLLAR AND DAMPER

The humidifier comes with a collar & damper mounting template. If possible ensure the bypass collar will be level to the humidifier duct connection. Try to keep the bypass collar within 30" of the humidifier. To ensure you have clear access to all components do not install the flexible bypass tube until all water and electrical connections are made to the humidifier.

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CAUTION: When cutting or drilling into ducting take care not to damage any air-conditioning coils or other furnace apparatus.

CAUTION: Wear safety glasses and work gloves when installing this unit. Sharp metal edges can cause severe injury.

1. Use adhesive tape to affix the bypass template onto the duct in the selected location.
2. Drill the 3 marked 1/8" holes.
3. Using a 3/8" drill bit (not supplied) drill a hole inside the circular area marked collar cut out.
4. Using the 3/8" hole drilled earlier as a starting point cut out the Collar Cut Out area marked on the template using tin snips (not supplied).
5. Mount the bypass collar and damper (Fig. 20) using the three supplied screws. The air damper should be installed in the open position. The top screw secures the damper.

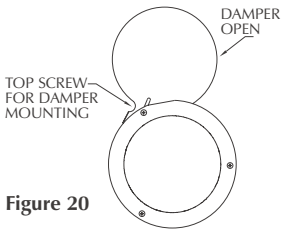


Figure 20

•INSTALLATION TIP If replacing an existing humidifier which has been installed on your furnace you may be able to use the existing cut-outs, however replace the components, bypass collar and damper, and bypass ducting. The majority of furnace humidifiers use 6" ducting for bypass.

STEP #4: WATER SUPPLY AND DRAINAGE CONNECTION

WATER CONNECTION TO THE HUMIDIFIER

IMPORTANT: Connect the tubing to the humidifier FIRST before connecting to the saddle valve.

1. SAND THE END (Fig. 21) of the plastic water supply tube. FAILURE TO DO SO MAY RESULT IN LEAKS. Use medium sandpaper (not provided) approx 1 1/4" from the end in a rotating motion. This assures a non-slipping, trouble free connection.

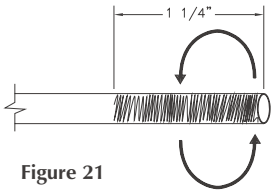


Figure 21

2. Slide the nylon compression nut and the black rubber ferrule onto the sanded plastic tubing and then fit the brass insert into the end of the plastic tubing. (Fig. 22)

Figure 22

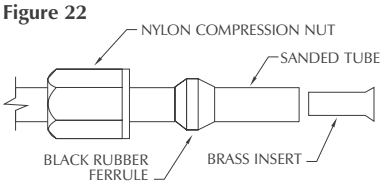
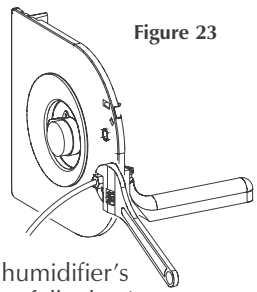


Figure 23



3. Push the plastic tubing firmly into the humidifier's float valve threaded water inlet. Carefully begin tightening the nut by hand. Use an adjustable wrench to finish tightening. (Fig. 23)

NOTE: The optimum tightness of the nylon compression nut will leave a gap of approximately 3/16" between the nylon compression nut and the nylon hex nut.

INSTALLING THE SADDLE VALVE TO THE WATER PIPE

The water supply for the humidifier is provided from an existing cold water pipe by using a self-piercing saddle valve. In order for you to use the supplied plastic tubing, select the nearest cold water pipe suitable for saddle valve installation.

1. Turn the main water supply off.
2. Rotate the saddle valve handle so that the piercing pin does not protrude beyond the top clamp.
3. With the rubber gasket in the fixed position, clamp the saddle valve on the selected location of the cold water pipe and mount the bolts and nuts to the saddle clamps.
4. To pierce the copper pipe, simply turn valve handle clockwise until you feel that it is firmly seated. (Fig. 24)

NOTE: Do not open the valve now. Proceed with the mounting of the plastic tubing to the saddle valve first.

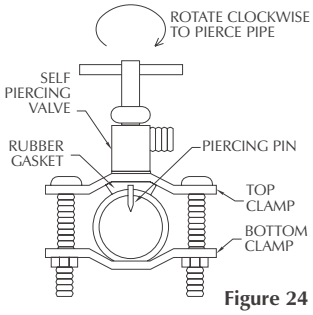


Figure 24

CONNECTING THE PLASTIC TUBING TO THE SADDLE VALVE

1. Cut the plastic tubing with a sharp knife to the proper length to fit between the humidifier and the saddle valve.
2. SAND THE END (Fig. 21) of the plastic water supply tube. FAILURE TO DO SO MAY RESULT IN LEAKS. Use medium sandpaper (not provided) approx 1 1/4" from the end in a rotating motion. This assures a non-slipping, trouble free connection.
3. Slide the brass compression nut and nylon ferrule onto the sanded plastic tube and fit the brass insert in the end of the tubing. (Fig. 25)

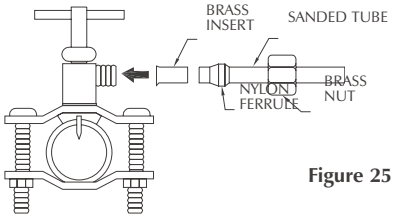


Figure 25

4. Push the tubing firmly into the saddle valve threaded water outlet, carefully begin tightening the compression nut by hand (be careful not to cross the threads). Use and adjustable wrench to finish tightening the brass compression nut. Do not over-tighten.

OVERFLOW DRAIN CONNECTION (OPTIONAL)

NOTE: WE STRONGLY RECOMMEND YOU INSTALL A DRAIN TUBE TO PROTECT YOUR PROPERTY IN CASE OF WATER LEAKAGE. IF YOU ARE PLANNING ON INSTALLING A DRAIN TUBE ONTO THE UNIT YOU WILL HAVE TO PURCHASE THE REQUIRED LENGTH OF TUBING AND A HOSE CLAMP SEPARATELY. AS WELL YOU SHOULD HAVE DRILLED OUT THE DRAIN FITTING BEFORE INSTALLING THE WATER PAN ONTO THE FURNACE. **ONLY DRILL OUT THE WATER PAN IF YOU PLAN TO INSTALL A DRAIN TUBE.**

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